

### **REMARKS**

The present Amendment amends claims 1, 3-5 and 7-10, leaves claim 2 unchanged and cancels claims 6 and 11. Therefore, the present application has pending claims 1-5 and 7-10.

In paragraph 2 of the Office Action the Examiner sets forth a requirement under 37 CFR §1.105 and requests Applicants to provide the title, citation and copy of each publication that any of the Applicants relied upon to develop the disclosed subject matter that describes Applicants invention particularly as developing the equations. Applicants submit that the specification as written describes Applicants' invention, which was not previously known and as such Applicants' invention cannot be found in any publications which describes conventional apparatus. The conventional apparatus relative to the present invention is described in the Background of the Invention section of the present application. Accordingly, Applicants have fully complied with the requirement of 37 CFR §1.105 and as such no publications or citations can be supplied. The Examiner's attention is directed to the Detailed Description of Preferred Embodiment section of the present application wherein a full discussion of the Applicants invention particularly with regard to the equations is provided.

In paragraph 3 of the Office Action the Examiner objected to the drawings as containing a reference numeral 111 which was not described in the specification. Reference numeral 111 refers to a transportation lead time after which the inventory of products is delivered into the market. Reference numeral 111 was added to page

10, line 1 so as to refer to the transportation lead time. Therefore, this objection overcome and should be withdrawn.

The specification stands objected to due to informalities noted by the Examiner in paragraphs 4 and 5 of the Office Action. Various amendments were made throughout the specification to correct the informalities noted by the Examiner. The specification was reviewed to uncover any other informalities. However, no other informalities were uncovered. Therefore, this objection is overcome and should be withdrawn.

The Examiner is respectfully requested to identify any other such informalities the Examiner may be aware of so that such informalities can be immediately corrected to expedite prosecution of the present application.

Claims 1-11 stand rejected under 35 USC §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regards as their invention. As indicated above, claims 6 and 11 were canceled. Therefore, this rejection with respect to claims 6 and 11 is rendered moot. Various amendments were made to the remaining claims 1-5 and 7-10 to bring them into conformity with the requirements of 35 USC §112, second paragraph. Therefore, Applicants submit that this rejection is overcome and should be withdrawn.

Specifically, amendments were made throughout the claims so as to overcome the objections noted by the Examiner in paragraphs 7 and 8 of the Office Action.

The Examiner's cooperation is respectfully requested to contact Applicants' Attorney by telephone should any further indefinite matters be discovered so that appropriate amendments may be made.

Claims 1-11 stand rejected under 35 USC §101 as allegedly being directed to non-statutory subject matter and as claiming recitations of a use without setting forth any steps involving the process. As indicated above, claims 6 and 11 were canceled. Therefore, this rejection with respect to claims 6 and 11 is rendered moot. Various amendments were made throughout the remaining claims 1-5 and 7-10 to cause such claims to be directed to statutory subject matter and to include recitations of use including steps performed in the process in accordance with 35 USC §101. Therefore, this rejection is overcome and should be withdrawn.

Specifically, amendments were made to the claims so as to more clearly recite that the present invention is directed to a method of production planning, implemented in a production planning system, wherein the production planning system upon implementing the production planning method performs various steps including making a restriction condition, solving a linear programming problem, calculating a feasible real value and showing the real value calculated.

Thus, the present invention is directed to method implemented in a system, said system being a machine as defined under 35 USC §101. Therefore, the amended claims recite statutory subject matter as per the requirements of 35 USC §101. Accordingly, reconsideration and withdrawal of the 35 USC §101 rejection of claims 1-5 and 7-10 is respectfully requested.

Claims 1-11 stand rejected under 35 USC §103(a) as being unpatentable over Cheng (U.S. Patent No. 6,138,103) in view of Thierauf (article entitled "Decision Making Through Operations Research"). As indicated above, claims 6 and 11 were canceled. Therefore, this rejection with respect to claims 6 and 11 is rendered moot. This rejection with respect to the remaining claims 1-5 and 7-10 is traversed for the following reasons. Applicants submit that the features of the present invention as now more clearly recited in claims 1-5 and 7-10 are not taught or suggested by Cheng or Thierauf whether taken individually or in combination with each other other as suggested by the Examiner. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Amendments were made to claims 1-5 and 7-10 so as to more clearly described features of the present invention not taught or suggested by any of the references of record whether taken individually or in combination with each other. Particularly, amendments were made to the claims so as to distinguish the present invention from the references of record namely Cheng and Thierauf.

Amendments were made to the claims so to more clearly describe that the present invention is directed to a method of production planning, in a production planning system, for calculating at least one management index related with production activity of production, material supply and/or transportation to a marketing point at a plurality of production points, material supplies and/or marketing.

According to the present invention, the production planning system upon implementing the production planning method performs various steps. These steps includes making a restriction condition for each of the at least one management

index formulated with an equation of an  $x$  equals a target value of each of the management index + a plus estrangement value from the target value (a variable) – a minus estrangement value from the target value (a variable) in which  $x$  is a real value of each of the management index by inputting each of the management index as a constant, solving a linear programming problem in which the restriction condition is incorporated, calculating a feasible real value  $x$  so that the estrangement between the target value of the each of the management index, calculated from an executable solution of the linear programming problem, comes to be minimal and showing the real value  $x$  calculated.

The above described features of the present invention now more clearly recited in the claims are not taught or suggested by Cheng or Thierauf.

Cheng discloses a method for searching for an appropriate scenario (combination of production items in every term which is equal to a combination pattern of variable) from plural scenarios which have been prepared previously.

The present invention as recited in the claims is entirely different from that taught by Cheng. Particularly, according to the present invention a scenario as taught by Cheng is not specified. Instead according to the present invention restriction conditions and objective functions are specified and the most suitable objective function is adopted based upon searching combinations of all variables which meet the specified restriction conditions. Therefore, according to the present invention even when the same objective functions is applied, the present invention can be more profitable to operate than that taught by Cheng.

Accordingly, Cheng fails to teach or suggest making a restriction condition for each of the at least one management index formulated with an equation of  $\dot{x}$  equals a target value of each of the at least one management index + a plus estrangement value from the target value (a variable) – a minus estrangement value from the target value (a variable), in which  $x$  is a real value of each of the at least one management index by inputting each of the management index as a constant as recited in the claims.

Further, Cheng fails to teach or suggest solving a linear programming problem in which the restriction condition is incorporated and calculating a feasible real value  $x$  so that the estrangement between the target value of each of the at least one management index calculated from an executable portion of the linear programming problem comes to be minimal as recited in the claims.

Still further, Cheng fails to teach or suggest showing the real  $x$  value calculated as recited in the claims.

The above noted deficiencies of Cheng are not supplied by any of the other references of record particularly Thierauf. Thus, combining the teachings of Cheng and Thierauf in the manner suggested by the Examiner in the Office Action still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

Upon review of Thierauf, it appears that the Examiner is merely relying on Thierauf for an alleged of linear programming. However, at no point is there any teaching or suggestion in Thierauf of the above described features of the present invention now recited in the claims regarding the making a restriction condition,

solving a linear programming problem, calculating a feasible real value  $x$  and showing the real value  $x$  calculated as recited in the claims.

Thus, Thierauf suffers from the same deficiency as Cheng relative to the features of the present invention as recited in the claims. Therefore, combining the teachings of Cheng and Thierauf in the manner suggested by the Examiner in the Office Action still fails to teach or suggest the features of the present invention as now more clearly recited in the claims. Accordingly, reconsideration and withdrawal of the 35 USC §103(a) rejection of claims 1-5 and 7-10 as being unpatentable over Cheng in view of Thierauf is respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references utilized in the rejection of claims 1-11.

In view of the foregoing amendments and remarks, applicants submit that claims 1-5 and 7-10 are in condition for allowance. Accordingly, early allowance of claims 1-5 and 7-10 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (520.39403X00).

Respectfully submitted,

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